



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,402	04/06/2001	Akira Koseki	JP9-1999-0308US1(590.047)	5149

35195 7590 05/20/2004

FERENCE & ASSOCIATES  
400 BROAD STREET  
PITTSBURGH, PA 15143

EXAMINER

CHAVIS, JOHN Q

ART UNIT	PAPER NUMBER
----------	--------------

2124

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/828,402

Applicant(s)

KOSEKI ET AL.

Examiner

John Chavis

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 2124

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-3, 5-6, 11-12 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The reference to "a series of paths that are not merged" does not provide a clear indication of what is intended. The applicant initially, in the claim refers to selecting a "path"; then, in the same sentence he speaks of a "series of paths". Therefore, it is not clear if a single path or a series of paths are to be extracted. The series portion appears to be out of sync with the rest of the claim. Therefore, the feature is interpreted as a single path selected. The dependent claim do not clear the problems associated with claim 1.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heisch (5,613,118) in view of the applicant's choice of conversion environment.

CLAIMS:

Heisch

1. A compiler for converting source code for a program written in a programming language into an object program written in a machine language comprising:

See fig. 3 item 330. Heisch does not specifically indicate that his system converts a program into an object program; however, the feature of which type of conversion is provided is considered a choice of design. The choice of utilizing an object program would have been obvious to a person of ordinary skill in the art at the time of the invention to take advantage of the inherent features provided; such as modularity, encapsulation and reusability, etc.

an optimization execution unit for performing optimization of said object program written in said machine language; and

See col. 2 lines 45-47.

a program modification unit for, before said optimization process is performed by said optimization execution unit, modifying said object program to provide a form that is appropriate for said optimization,

See col. 2 lines 19-24.

wherein, when said object program

See col. 2 lines 38-46.

includes a branch, said program modification unit selects at said branch a specific path to extract, relative to said branch, a series of paths that are not merged.

2. The compiler according to claim 1, wherein said optimization execution unit performs said optimization for said paths that are extracted by said program modification unit.

See col. 4 lines 8-10. and 32-37.

3. The compiler according to claim 1, wherein, when differences in execution frequencies depend on a plurality of paths at said branch in said object program, said program modification unit selects a path having a higher execution frequency, and relative to said branch, extracts a series of paths that are not merged.

See col. 4 lines 19-31.

The features of claims 4-8 and 13-16 are taught via claim 1 above. The flow graph feature is taught via col. 4 lines 25-31. Furthermore, in reference to claim 5, see col. 4 lines 39-49.

Claim 9 is merely considered as defining the flow graph indicated above and therefore, since, flowgraphs were well known to a person of ordinary skill in the art at the time of the invention (as taught by Heisch), the claim is rejected for

Art Unit: 2124

the same reasons as claim 8, which provides for restructuring code see col. 5 lines 7-19.

In reference to claim 10, see col. 3 lines 30-40.

As per claim 11, see the rejection of claim 1 above.

The features of claim 12 are taught via claim 3.

Other applications, although not specifically cited are considered pertinent to the applicants disclosure. For example, Berstis teaches an object oriented optimizing environment, similar to the one referenced in the rejection above. Furthermore, the applicant is hereby reminded of his duty to disclose.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Chavis whose telephone number is (703) 305-9665. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2124

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jqc  
May 17, 2004



JOHN CHAVIS  
PATENT EXAMINER  
ART UNIT 2124